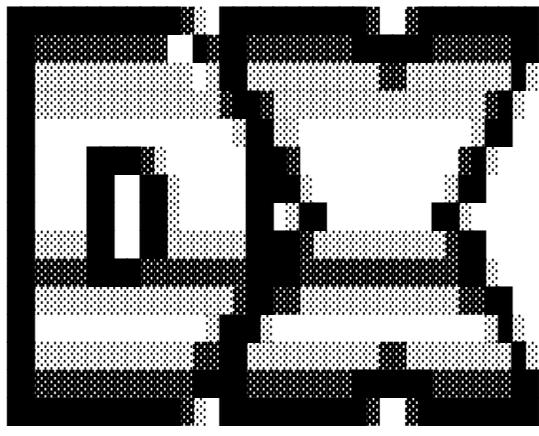


SUPER  
MARIO  
BROS



by flamepanther

Portions available under a Creative Commons license (BY-NC-SA 4.0)

Super Mario Bros DX v4.5 - Anniversary Edition  
An old-school "facelift" patch for Super Mario Bros.

Welcome to the third in a series of updates celebrating 25 years of Super Mario Bros DX! Yes, really. The first well-known version was v1.1, released on Zophar's Domain in 1999. But earlier versions were distributed via message boards and IRC in 1997! Between now and 2024 (the 25th anniversary of 1.1 releasing on ZD) I'll be adding many more extras to celebrate. In this update we are going to use the tiles that were freed up in 4.2 to make things just a bit more varied and lush.

Brand new in this update are three secondary Style patches to further customize the look of the game. Each style patch has its own flavor and purpose. All of them require the main Super Mario Bros DX patch to be applied first!

#### # What This Is:

This IPS patch is a graphics enhancement for Super Mario Bros for the NES and Famicom. The graphics are a mix of original work and art adapted from Super Mario All-Stars and Super Mario Bros 3. For reliable results, you should apply this patch to a clean and verified ROM dump of the standalone NTSC version of Super Mario Bros. The ROM should be headered, but it shouldn't matter whether the header is in iNES or NES2 format.

The patches may also work when applied over other ROM hacks or on a few bootleg variants of Super Mario Bros, but your results with these may vary.

#### # Files:

Super Mario Bros DX 4_5.ips	- The main patch file for most SMB1 ROMs.
Super Mario Bros DX 4_5( PAL).ips	- The alternate patch file for the 50Hz PAL ROM.
Super Mario Bros DX 4_5 Vapor 1_1.ips	- The patch for getting the Aesthetic Edition experience.
Readme SMBDX 4_5.pdf	- The readme file. You are reading it.
<DIR> Bonus Patches	- Optional patches to apply on top of the main patch.
<DIR> Historical Archive	- Old versions of the main patch, with bugs fixed.

More to come...

#### # Links to Extras:

Official images for building your own covers, boxes, or labels:  
<https://www.mediafire.com/folder/jtpehms6gnalo/SMBDX>

Readymade assets for Steam, GOG Galaxy, Playnite, and other launchers:  
<https://www.steamgriddb.com/game/5304607>

#### #Hardware & Emulation compatibility:

This *ought*\* to work on just about anything that plays NES and Famicom games.

The main version of the patch has been tested on the following hardware via RetroUSB PowerPak and Everdrive N8:

- Nintendo NES
- Analogue Nt (classic) with Hi-DefNES HDMI module
- Retro-Bit Retro Duo

I've also seen video of it running on a Hyperkin Retron5 and and some unknown famiclones.

It's been tested in both OpenFPGA NES cores for the Analogue Pocket.

The only emulators tested with the current version are MESEN and MESEN 2, but it should work on anything that can play the unmodified game. Previous versions were running on Pasofami, Nesticle, FCE and its variants, Nestopia and its variants, and others.

I have also tried to keep the patch as palette-agnostic as possible. Recent versions are developed using the relatively authentic default MESEN palette, but the following have also been tested for any serious issues:

- All available palettes by FirebrandX
- PC-10 RGB (so it should look OK on your Famicom Titler or ancient RGB modded NES)
- NES Classic Edition
- 3DS Virtual Console
- Sony CXA2025AS
- Hybrid (RGBSource)
- Wavebeam

#### # Permission for Use in Other Hacks:

I make no claim to any graphics taken directly from other games, obviously. However, most of the graphics in the patch are either new or modified, so please be mindful. If you plan to use Super Mario Bros 3 graphics in a project, it is probably better to get them directly from Super Mario Bros 3, for example.

For use of my own original graphics, I ask the following:

- Include credit and attribution of my work with yours, in whatever way is feasible.
- Do not use my work in commercial products.
- Pay-it-forward by allowing your work to be used under these same conditions.

For a more formal version of these requirements, a link to the Creative Commons BY-NC-SA 4.0 license is provided at the end of this document.

#### # Credits:

Pixel Art, Hacking (all editions): flamepanther  
Sound & Music Hacking (Aesthetic Edition): Amilgi  
Additional graphics hacking: Sir\_Kero/Octorocket  
Special Thanks in RaNdOm order: Emerald, RetroSho, L0kii, sllme, law56ker, Thraxen, AP, Googie, Hyperhacker, Taichou, Zophar, Retromantra, Snes Attack, and YOU!

#### # Known Issues:

- The shading on Super Luigi's face is green. (Palette limitation)
- Green Koopa Troopas have green skin. (Palette limitation)
- Bowser's proportions and posture are somewhat awkward due to how his sprite is built.
- In the PAL version, Hammer Bros remain in the "green" sprite group because the Super Mario Remodeler tool doesn't work with the 50Hz version of the game.
- The 50Hz PAL patch is not compatible with all bonus patches due to data locations being moved.

#### # Tools Used:

PasoFami  
<https://hp.vector.co.jp/authors/VA005758/>

Nesticle  
[https://archive.org/details/nesticle\\_dos](https://archive.org/details/nesticle_dos)

Hex Workshop  
<http://www.hexworkshop.com/>

Tile Layer & Tile Layer Pro  
<https://www.romhacking.net/utilities/108/>

FCE Ultra & FCEUX  
<https://fceux.com/web/home.html>

Nestopia  
<https://nestopia.sourceforge.net/>

NEStile  
<https://github.com/jmcmahan/nestile>

GHex  
<https://wiki.gnome.org/Apps/Ghex>

SMB Graphics Workshop  
<https://www.romhacking.net/utilities/1434/>

SMB Remodeler  
<https://www.romhacking.net/utilities/1319/>

SMB Title Screen Editor  
<https://www.romhacking.net/utilities/1513/>

MESEN & MESEN 2  
<https://github.com/SourMesen/Mesen2>

## # Change Log:

### Changed for 4.5 (Anniversary Edition update 3)

---

#### Technical

---

- Rearranged some background tiles in CHR ROM. Reduces the work needed when porting SMBDX graphics to other SMB1 ROMs.
- 50Hz PAL version patch now exists.
- Historical Archive patches older than v3.5 are updated to fix a bug that occurred when RAM was initialized with random values at startup.

#### Sprites

---

- Fixed some longstanding transcription errors made when copying small Mario's sprites from SMB3.
- Fixed a visual issue when player throws a fireball while jumping.
- Fixed incorrect tile mapping that made Mario's hat look weird while growing to Super Mario.
- Removed shading from Super Mario's buttons.
- Updated Mario's feet with All-Stars as a reference.
- New swimming frame for small Mario.
- New squished goomba sprite from scratch (but inspired by SML2).
- New Spiny egg sprites from scratch.
- Goal flag reworked. The colors are no longer inverted compared to the original game.
- Extensively reworked Bowser for better proportions and visual clarity.
- Underground enemy palettes redone.
- Underwater enemy palettes use colored outlines like the rest of the game now.

#### Backgrounds

---

- Breakable bricks aligned to former Simple Style.
- Exterior castle tiles updated.
- New cracked cobblestones with cleaner shading.
- Bushes aligned to former Simple Style.
- Mushroom platforms aligned to former Simple Style.
- The stems of mushroom platforms are two pixels narrower now.

#### Extras

---

- "Known Issues" section added to Readme.
- "Tools Used" section added to Readme.
- "Compatibility" section added to Readme.
- FP Style patch retired.
- Simple Style patch retired.
- Vapor Style patch updated to 1.1

#### FP Style

---

- Assets now available as individual patches. Combined FP Style patch discontinued.

#### Simple Style

---

- Assets moved to main patch or available as individual patches. Combined patch discontinued.

#### Vapor Style

---

- No longer requires main patch to be applied first.
- Rebased on 4.5 of main patch, except for select assets.
- Switched to All-Stars style Goombas for greater depersonalization.
- Earthtone enemy palette changed for colder look and better overall color balance.

### Changed for 4.4 (Anniversary Edition update 2)

---

#### Technical

---

- Moved some existing tiles so new tiles can be placed in better locations.
- Changed meta-tiles to account for moved tiles.

#### Sprites

---

- Slightly updated shading on bricks.
- Cement-topped bricks exist again.
- Improved castle enemy palettes.

#### Backgrounds

---

- Brand-new wooden fences from scratch.
- Slightly updated shading on bricks.
- Cement-topped bricks exist again.
- Improved outdoor castle parapets.
- Tree platform trunks realigned to match All-Stars.
- Differentiated mushroom platform trunks from background tree foliage.
- Indoor castle blocks moved 1 pixel up+left to fix a visual flaw in World 8-4.

#### Extras

---

- FP Style patch v1.0

- Simple Style patch v1.0
- Vapor Style patch v1.0
- Credits section added to documentation
- Creative Commons license

#### Changed for 4.2 (Anniversary Edition update 1)

---

##### Technical

---

- Restored period (.) character to resolve visual bug in the ending.
- Moved the background hillside shading tile to another location in CHR table.
- Erased the large title screen font to free up tiles for the two changes directly above.
- Redesigned title screen to compensate for lack of large font.
- Reserved remaining freed tiles for future changes.

##### Backgrounds

---

- Created tiny pipe-themed frame tiles for new title screen.
- Fixed an inconsistency in the warp pipe openings.
- Ropes and flagpoles are outlined again.

##### Extras

---

- Historical Archive added.
- Changes for v3.2 previously listed as part of v3.4 are moved to 3.2 in the change log.

#### Changed for 4.0 (Anniversary Edition)

---

##### Technical

---

- Reordered sprite palette colors. This should improve compatibility with other hacks.
- Updated title screen.

##### Sprites

---

- Added shading and details to the Super Mario sprite, tweaked hat.
- New interstitial walking frame for small Mario (adapted from All-Stars).
- New climbing frames for small Mario (adapted from All-Stars).
- New Bullet Bill sprite (adapted from Super Mario World).
- New piranha plant sprite (adapted from Super Mario World).
- New Goomba sprite (my own work).
- New springboard sprite (adapted from Super Mario World).
- New Blooper sprite (adapted from on All-Stars).
- New end of level skull flag sprite (my own work).
- New Spiny sprite (partly based on All-Stars).
- New Koopa Troopa sprite (partly based on All-Stars).
- Improved star flag sprite.
- Restored the top of the vines to a leaf instead of a curl.
- Enemy palettes changed for shading and visibility.
- Hammer Bros use black/brown palette group instead of green.

##### Backgrounds

---

- New stair block (adapted from All-Stars).
- New font (partly based on All-Stars).
- Reverted the hill spots to original SMB1 graphics.
- Added alternate color upside-down hill spots.
- New pipe graphics (my own work).
- Removed outline from ropes and flagpole (freed up 2 tiles).
- New GFX for tree platforms (my own work).
- New trunk GFX for tree platforms (adapted from All-Stars).
- New trunk GFX for background trees (adapted from All-Stars).
- New bushes/grass graphics (adapted from All-Stars).
- New water/lava surface (loosely based on All-Stars).
- New pulley graphics (partly based on SMB1).
- New flagpole top.
- Changed the castle parapets.
- Thickened outline around title screen lettering to match normal letters.
- Night sky colors reverted to black.
- Ground/stone palettes improved.

#### Changed for v3.5 (unreleased)

---

##### Technical

---

- Rebuilt entire patch base from a clean ROM in case of bugs.
- Updated title screen data.

##### Sprites

---

- New Princess Peach sprite (my own work).
- Reverted skull flag to flat, undetailed triangle.

##### Backgrounds

- 
- Removed coloring from title screen letters.
  - Improved DX logo.

Changed for v3.4

=====

#### Technical

- 
- Fixed a bug in the HUD that would cause graphical errors on a real NES.

#### Sprites

- 
- Fixed a longstanding error in Super Mario's hat when crouching.
  - Bubbles under water look more rounded.
  - Improved springboards.
  - Fireballs in castle stages are no longer Barbie pink.
  - New Bowser sprite.
  - Major improvements to Peach's sprite.
  - New moving platforms.
  - New coin grab animation.
  - New Buzzy Beetle--now closer to modern versions.
  - New explosion/firework animation. Works considerably better as fireworks now.

#### Backgrounds

- 
- Darkened way-too-light sky and greenery palettes.
  - Further improved shading on the World 2-1 type background trees.
  - Hills have trees on them instead of SMB3 style lines/eyes.
  - Drawbridges now look like something that could actually fall apart when using the axe.
  - Replaced the (buggy) SMB3 bricks with new SMB1 ones based on All-Stars.
  - New staircase blocks.
  - New water/lava graphics.
  - New castle tiles.
  - New background clouds. They do not use the same tiles as the bushes!
  - New World 4-3 style mushroom platforms.

Changed for v3.2 (previously unreleased)

=====

#### Technical

- 
- Fixed iNES header corruption. Now works on Powerpak and very picky emulators.
  - Several color choices corrected for real NES hardware on NTSC televisions.
  - Many other colors chaged for contrast or as a matter of taste.

#### Sprites

- 
- Koopa Troopas now bob up and down when they walk.

#### Backgrounds

- 
- New standard/Underground floor tiles.
  - SMB3 "X" blocks previously used for floors are now stair blocks.
  - Hills are shaded to have an implied light source.
  - New bushes--and they are not recolored clouds!
  - Shaded the top of the flagpoles.
  - New World 1-3 style tree-top platforms.
  - Improved shading on the World 2-1 type background trees.
  - New underwater ground tiles.
  - New coral based on SMB1 design.
  - New outdoor bridges.
  - New pulleys.
  - New axe.
  - Sunset/dusk sky colors for worlds 3 and 6.

#### Older Changes

=====

My logging and patch hygiene practices before 3.4 were non-existent. I will try to research and catalog these changes as the Anniversary Edition project continues.

#### # Disclaimers:

This is a strictly non-commercial fan-work. It is not distributed by the author except as a patch that must be applied to Nintendo's original commercial work. It cannot be used independently and does not include any code from the original game. The author receives absolutely NO compensation for the distribution or use of this work, monetary or otherwise, including any of the following: advertisements on any website hosting the work, monetization of any individual streaming video or monetization of any video channel. The author does not request or accept donations on any crowdfunding, subscription, or money transfer sites or services. No competition with Nintendo or infringement on Nintendo's intellectual property rights is intended.

All custom pixel art © flamepanther 1997-2023. Some rights reserved (CC BY-NC-SA 4.0).  
<https://creativecommons.org/licenses/by-nc-sa/4.0/>